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(71) Applicant and
(72) Inventor: FENELON, Terry [US/US]; 670 Laura Court, Mendota Heights, MN 55118 (US).

(74) Agent: BRUESS, Steven, C.; Merchant & Gould P.C., P.O. Box 2903, Minneapolis, MN 55402-0903 (US).

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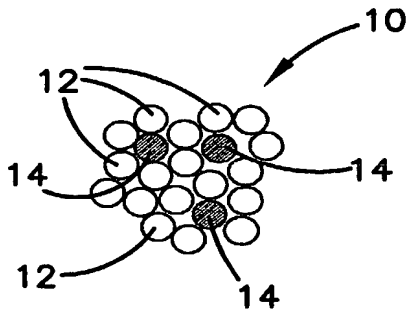
(54) Title: PIGMENT AGGLOMERATES, THEIR MANUFACTURE, AND USE




(57) Abstract: A pigment agglomerate and method of making the pigment agglomerate. The agglomerate is a collection of pigment particles and at least one carrier particle, the pigment particles and carrier particle held together by interparticle forces such as magnetic forces, electrostatic forces, van der Waal's forces, and other physical or chemical interparticle forces. A chemical surface treatment or other treatment may be applied to either or both of carrier particles and pigment particles in order to improve the interparticle forces therebetween. No binder, such as a polymeric binder or adhesive, is used to adhere or maintain the particles together forming the agglomerates.

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## AMENDED CLAIMS

[received by the International Bureau on 17 September 2004 (17.09.04);
original claims 1, 2, 4-13 amended, claim 14 cancelled]

1. A pigment agglomerate comprising:

(a) a plurality of pigment particles; and

(b) a plurality of silica fume particles held to the pigment particles by interparticle forces, wherein a weight ratio of the carrier particles to the pigment particles is about 0.5:10 to 3:10.

2. The pigment agglomerate according to claim 1, wherein the pigment particles are iron oxide.

3. The pigment agglomerate of claim 1, wherein the interparticle forces is at least one of magnetic forces, electrostatic forces, and van der Waal's forces.

4. A pigment agglomerate consisting essentially of:

(a) a plurality of pigment particles; and

(b) a plurality of silica fume particles.

5. The pigment agglomerate according to claim 4, wherein the pigment particles are iron oxide.

6. A pigment agglomerate consisting only of:

(a) a plurality of pigment particles; and

(b) a plurality of silica fume particles.

7. The pigment agglomerate according to claim 6, wherein the pigment particles are iron oxide.

8. A method of making a pigment agglomerate comprising:

(a) mixing a plurality of pigment particles with a plurality of silica fume particles, at a weight ratio of 0.5:10 to 3:10 silica fume particles to pigment particles, the mixing being done with a rolling motion.

9. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles comprises:

(a) mixing a plurality of iron oxide particles with the plurality of silica fume particles.

10. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion in a barrel mixer, a tumbler, or a ribbon mixer.

11. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of iron oxide particles with a plurality of silica fume particles with a rolling motion in a barrel mixer, a tumbler, or a ribbon mixer.

12. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion in a barrel spinning or tumbling about its longitudinal axis.

13. The method of claim 8, wherein the mixing of a plurality of pigment particles with a plurality of silica fume particles with a rolling motion comprises:

(a) mixing of a plurality of iron oxide particles with a plurality of silica fume particles with a rolling motion in a barrel spinning or tumbling about its longitudinal axis.